REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1, 2, 4-16, and 18-30 are presently pending in this case.

In the outstanding Official Action, Claims 1-6, 11-20, and 25-29 were rejected under 35 U.S.C. §103(a) as unpatentable over Sekine et al. (U.S. Patent No. 6,101,188, hereinafter "Sekine") in view of Naghian et al. (U.S. Patent Application Publication No. 20030235175, hereinafter "Naghian"); Claims 7-10, 21-24, and 30 were rejected under 35 U.S.C. §103(a) as unpatentable over Naghian in view of Sekine.

Applicants and Applicants' representatives thank Examiners Rao and Russell for the courtesy of the interview granted to Applicants' representatives on January 14, 2008. During the interview, differences between the claims and Sekine were discussed. Examiner Russell agreed to further consider the rejection of record after formal submission of the present response.

With regard to the rejection of Claims 1, 11, 15, 25, and 29 as unpatentable over Sekine in view of Naghian, that rejection is respectfully traversed.

Claim 1 recites in part:

> a plurality of data input/output ports;
> means for storing a MAC learning table in which a
> MAC address of data for forwarding is associated with an
> output port; and
> a control section for updating said MAC learning table,
> wherein said control section is configured to set, for a
> mobile node, in said MAC learning table, *a plurality of entries*
> *associating different output ports with a MAC address of said*
> *mobile node*, and *output data addressed to said MAC address*
> *of said mobile node received via said network, to said*
> *plurality of output ports in parallel*, based on said plurality of
> entries set in said MAC learning table, and
> said control section is configured to set an entry in said
> MAC learning table as an additional entry based on a MAC
> address of a next access point contained in a handover start
> message received from said mobile node, wherein said

additional entry sets a port to which said next access point is connected, as an output port corresponding to said MAC address of said mobile node, and output said data addressed to said MAC address of said mobile node received via said network *in parallel*, to said output ports listed in said plurality of entries as to said MAC address of said mobile node set in said MAC learning table, wherein said output ports are a plurality of ports to which a current access point and said next access point of said mobile node are connected.

In the system of recited in Claim 1, a mobile node transmits a handover start message containing address information of a destination access point to a control section *before performing a handover*. The control section adds an entry to a MAC learning table based on the address contained in the message, resulting in *a plurality of entries* associating different output ports with the MAC address of the mobile node. The control section then forwards packets addressed to the mobile node to a current access point of the mobile node as well as to its destination access point *in parallel* based on the entries in the MAC learning table. As a result, the mobile node can receive data packets at once upon connection to the new access point after having performed a handover. Thus, high-speed handovers can be supported.

The outstanding Office Action cited Sekine as describing "a control section" as recited in Claim 1, and cited Naghian as describing "a mobile node" and "an access point." In this regard, the outstanding Office Action asserted that LAN controlling means 1 of Sekine outputs data addressed to the MAC address of the mobile node to the ports (which includes (1) the current port and (2) the port which is assigned to the mobile node after having performed handover) in parallel.[1] However, it is respectfully submitted that Sekine does not disclose the above feature. Instead, it is respectfully submitted that Sekine only describes transferring data addressed to a MAC address of a mobile node to a destination address *or* to a broadcast address. In fact, it is respectfully submitted that Sekine is designed to prevent this from occurring.

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[1]See the outstanding Office Action at page 2, line 20 to page 3, line 3.

Sekine describes the creation and update of entries in address learning table 42 at

column 12, lines 13-24. This portion states in part:

> If a MAC address entry having an equal value to the SA
> has been produced *already, then the reception port number is
> set to the port identification number* and the aging counter is
> reset to its initial value to update the MAC address entry. If a
> MAC address entry which coincides with the SA is *not
> detected, then a new entry is produced,* and the reception port
> number is set to the port identification number and an initial
> value is set to the aging counter in a similar manner.

Thus, if a particular MAC address is not included in the table, a new entry is

produced. If a particular MAC address is included in the table, a second entry is *not*

produced; the original entry is *updated* with the new port identification number. Therefore,

the device of Sekine never sets a plurality of entries associating *different* output ports with a

MAC address of a single mobile node.

Further, Sekine describes that multiple bridge groups are created to handle the case

where two different terminals have the same MAC address. In such a case, the two terminals

are assigned to different bridge groups to prevent the same MAC address from being in a

single bridge group more than once.[2] Therefore, a packet is only sent to a single port, as

described at column 12, lines 40-53:

> *If a MAC address entry which coincides with the DA
> is detected in MAC address learning table 42$_k$,* then the aging
> counter is checked, and if the aging counter has a value smaller
> than its limit value, *a port number entry* is read out from the
> table. Using the read out port number as a key, bridge group
> table 41 is searched to confirm that the port number belongs to
> the bridge group "A". Since learning is performed for each
> group, incoincidence does not occur in principle, and therefore,
> this searching process may be omitted.
> Thereafter, *the obtained port number is set as a
> transmission destination* to the transmission port ID field in
> the buffer and loads the pointer information into transmission
> buffer queue 9.

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[2]See Sekine at column 13, lines 40-51.

As described above, *a single port number entry* is read out from the table, and this *single* port number entry is set as the transmission destination. Accordingly, the device described by Sekine does not *output data to a plurality of output ports in parallel*. Consequently, Sekine does not teach or suggest a "control section" as defined in Claim 1.

Further, it is respectfully submitted that Naghian does not teach a "mobile node" as defined in Claim 1. In this regard, Naghian describes a system including a Mobile IP network 100. In a Mobile IP network, the care-of address is assigned when the mobile node moved from the current network to the next network, and it is *not* assigned *before* moving. Accordingly, the home agent can not transfer data addressed to the home address of the mobile node to the care-of address during assigning the care-of address. Namely, the mobile node can not receive data addressed to the home address seamlessly when the node moves to the new network. Further, in a Mobile IP network, data addressed to the home address are not transmitted to both of the home address *and* the care-of address. Thus, it is respectfully submitted that Naghian does not teach a "mobile node" as defined in Claim 1.

Thus, as Sekine and Naghian do not teach or suggest all of the elements of Claim 1, Claim 1 (and Claims 2 and 4-6 dependent therefrom) is patentable over Sekine in view of Naghian.

Claim 11 recites in part:

> *said communication terminal apparatus is configured to acquire a MAC address of a next access point to which said communication terminal apparatus is scheduled to be connected next, and broadcast a handover start message containing said MAC address of said acquired next access point*;
> said data forwarding controller is configured to set an entry in a MAC learning table as an *additional entry* based on said MAC address of said next access point contained in said handover start message received from said communication terminal apparatus, wherein said entry sets a port to which said next access point is connected, as an output port corresponding to a MAC address of said communication terminal apparatus; and

> *output data* addressed to said MAC address of said communication terminal apparatus received via said network, *in parallel to output ports listed in a plurality of entries* as to said MAC address of said communication terminal apparatus set in said MAC learning table, wherein said output ports are a plurality of ports to which a current access point and said next access point of said communication terminal apparatus are connected.

As noted above, <u>Sekine</u> does not teach or suggest any element configured to set an entry in a MAC learning table as an *additional entry* based on a MAC address of a next access point, or output data *in parallel* to output ports listed in a plurality of entries. Thus, <u>Sekine</u> does not teach or suggest "a data forwarding controller" as defined in Claim 11.

Further, <u>Naghian</u> does not teach or suggest any communication terminal apparatus configured to acquire a MAC address of a next access point to which the communication terminal apparatus is scheduled to be connected next, and broadcast a handover start message containing the MAC address of the acquired next access point. Therefore, <u>Naghian</u> does not teach or suggest "a communication terminal apparatus" as defined in Claim 11 either. Consequently, as <u>Sekine</u> and <u>Naghian</u> do not teach or suggest all of the elements of Claim 11, Claim 11 (and Claims 12-14 dependent therefrom) is patentable over <u>Sekine</u> in view of <u>Naghian</u>.

Claim 15 recites in part:

> (a) *setting,* for a mobile node, in a MAC learning table in which a MAC address of data for forwarding is associated with an output port, *a plurality of entries associating different output ports with a MAC address of said mobile node*; and
> (b) *outputting data* addressed to said MAC address of said mobile node received via said network, *to said plurality of output ports in parallel* based on said plurality of entries set in said MAC learning table,
> wherein said step (a) comprises *setting an entry in said MAC learning table as an additional entry based on a MAC address of a next access point contained in a handover start message received from said mobile node,* wherein said additional entry sets a port to which said next access point is connected, as an output port corresponding to said MAC address of said mobile node; and said step (b) comprises

> *outputting said data addressed to said MAC address of said*
> *mobile node received via said network, in parallel to said*
> *output ports listed in said plurality of entries as to said MAC*
> *address of said mobile node set in said MAC learning table,*
> wherein said output ports are a plurality of ports to which a
> current access point and said next access point of said mobile
> node are connected.

As noted above, Sekine does not teach or suggest setting *a plurality of entries*

associating *different* output ports with a MAC address of a mobile node, or outputting data *in*

parallel to output ports listed in a plurality of entries. Thus, Sekine does not teach or suggest

"outputting data" as defined in Claim 15. Further, Naghian does not teach or suggest this

subject matter either. Consequently, as Sekine and Naghian do not teach or suggest all of the

elements of Claim 15, Claim 15 (and Claims 16-20 dependent therefrom) is patentable over

Sekine in view of Naghian. Further, as Claim 29 recites similar elements to Claim 15, Claim

29 is patentable over Sekine in view of Naghian for at least the same reasons.

Claim 25 recites in part:

> *said communication terminal apparatus acquires a*
> *MAC address of a next access point to which said*
> *communication terminal apparatus is scheduled to be*
> *connected next, and broadcasts a handover start message*
> *containing said MAC address of said acquired next access*
> *point;*
> said data forwarding controller sets an entry in a MAC
> learning table as an *additional entry* based on said MAC
> address of said next access point contained in said handover
> start message received from said communication terminal
> apparatus, wherein said additional entry sets a port to which
> said next access point is connected, as an output port
> corresponding to a MAC address of said communication
> terminal apparatus; and
> *outputs data* addressed to said MAC address of said
> communication terminal apparatus received via said network,
> *in parallel to output ports listed in a plurality of entries* as to
> said MAC address of said communication terminal apparatus
> set in said MAC learning table, wherein said output ports are a
> plurality of ports to which a current access point and said next
> access point of said communication terminal apparatus are
> connected.

As noted above, <u>Sekine</u> does not teach or suggest setting an entry in a MAC learning table as an ***additional entry*** based on a MAC address of a next access point, or outputting data ***in parallel*** to output ports listed in a plurality of entries. Thus, <u>Sekine</u> does not teach or suggest "said data forwarding controller sets ..." and "outputs data ..." as defined in Claim 25. Further, <u>Naghian</u> does not teach or suggest this subject matter either. Therefore, <u>Naghian</u> does not teach or suggest "said communication terminal apparatus acquires a MAC address" as defined in Claim 25. Consequently, as the combination of <u>Sekine</u> and <u>Naghian</u> does not teach or suggest all of the elements of Claim 25, Claim 25 (and Claims 26-28 dependent therefrom) is patentable over <u>Sekine</u> in view of <u>Naghian</u>.

With regard to the rejection of Claims 7, 21, and 30 as unpatentable over <u>Naghian</u> in view of <u>Sekine</u>, that rejection is respectfully traversed.

Claim 7 recites:

> A communication terminal apparatus of a mobile type which performs data transmission/reception via a network and which changes access points based on data receiving conditions, wherein ***said communication terminal apparatus is configured to acquire a MAC address of a next access point to which said communication terminal apparatus is scheduled to be connected next,*** and ***broadcast a handover start message containing said acquired MAC address of said next access point***, and ***perform a handover process on condition that said communication terminal apparatus receives a handover setting completion message from a data forwarding controller as a response to said handover start message***.

As noted above, <u>Naghian</u> does not teach or suggest a communication terminal apparatus configured to acquire a MAC address of a next access point to which the communication terminal apparatus is scheduled to be connected next, and broadcasts a handover start message containing the MAC address of the acquired next access point. Further, as <u>Naghian</u> does not teach or suggest a mobile node transmits a handover start message containing address information of a destination access point to a control section

before performing a handover, <u>Naghian</u> does not teach or suggest a communication terminal apparatus configured to perform a handover process on condition that a communication terminal apparatus receives a handover setting completion message from a data forwarding controller as a response to a handover start message. Therefore, <u>Naghian</u> does not teach or suggest "a communication terminal apparatus" as defined in Claim 7. Further, it is respectfully submitted that <u>Sekine</u> does not teach or suggest any of these elements either. Consequently, as <u>Sekine</u> and <u>Naghian</u> do not teach or suggest all of the elements of Claim 7, Claim 7 (and Claims 8-10 dependent therefrom) is patentable over <u>Naghian</u> in view of <u>Sekine</u>.

Claims 21 and 30 recite in part:

> acquiring a MAC address of a next access point to which said communication terminal apparatus is scheduled to be connected next;
> broadcasting a handover start message containing said acquired MAC address of said next access point; and
> performing said handover process ***on condition*** that a handover setting completion message is received from a data forwarding controller as a response to said handover start message.

As noted above, <u>Naghian</u> does not teach or suggest a mobile node transmits a handover start message containing address information of a destination access point to a control section ***before performing a handover***. Therefore, <u>Naghian</u> does not teach or suggest "acquiring," "broadcasting," and "performing" as recited in Claims 21 and 30. Further, it is respectfully submitted that <u>Sekine</u> does not teach or suggest any of these elements either. Consequently, as <u>Sekine</u> and <u>Naghian</u> do not teach or suggest all of the elements of Claims 21 or 30, Claims 21 and 30 (and Claims 22-24 dependent therefrom) are patentable over <u>Naghian</u> in view of <u>Sekine</u>.

Accordingly, the pending claims are believed to be in condition for formal allowance.

An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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